ABSTRACT

5   An extension of a Link Aggregation Protocol (LAP) over the network allows current Ethernet point-to-point LAPs to operate across a Metropolitan Area Network (MAN). A maximum disjoint path algorithm allows selection of a plurality of alternative end-to-end physical routes between two data terminals. These physical routes share a minimum number of nodes and physical links.

10   End-to-end logical links are then formed by a plurality of successive physical links between nodes containing protocol compatible devices, the physical links being selected based on their physical characteristics such as bandwidth and delay.

Multiple logical links can be provisioned, without dedicating, between any

15   two data terminals over the network. The logical links provide the virtual point-to-point links that the edge LAP devices require. The extension of LAP/s over the network provides increased availability because a network failure can now be propagated to the edge of the network to allow the edge LAP devices to quickly react to the failure.

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